

Radiation Training Course Description and Facility Requirements

Course Description

The radiation training course *Everything You Wanted to Know About Radiation But Were Afraid to Glow* consists of three modules presented in 8 hours, which can be tailored to the needs of your organization. Each module is described below.

Basics of Nuclear Radiation Lecture (4 hours) 8:30am to 12:30pm

1. Radiation basics including types and characteristics of radiation
2. Biological effects and how radiation interacts with the human body
3. Exposure and radiation measurement
4. Personal protection methods and dosimetry
5. Radioactive sources both natural and man-made
6. Instrumentation types and limitations
7. Regulations familiarity
8. Site protocols for responding to an incident or investigating a site
9. Demystifying radiation
10. Radiological terrorism

Hands-On Exercise (2 hours) 1:30pm to 3:30pm

The class is split into two groups to complete each exercise. One exercise simulates a radiological emergency response. The participants use different types of instrumentation to locate various types of radioactive sources and learn more about instrument technologies. The other exercise consists of four separate experiments. Two demonstrate the principles of personal protection (shielding and distance). The third helps the participant to learn proper decontamination frisking techniques. In the forth experiment, common radioactive sources are identified.

Radiological Case Studies (1.5 hours) 3:30pm to 5:00pm

Relevant radiological investigations and cleanup actions will be presented to demonstrate the practical process of investigation and cleanup of radiological sites. Four case studies are presented. In addition, a brief overview of the mission and capabilities of the EPA's Emergency Response Office is presented.

Facility Requirements

The hosting organization is responsible for providing a suitable facility. Please contact the course instructor if you have modifications to the following.

1. Presentation room that accommodates sufficient chairs and tables with one extra table for an equipment display and the computer projector
2. Projector screen
3. Dry erase white board or flip chart with markers
4. 10 foot extension cord and power strip for computer and computer projector
5. Exercise location separate from the presentation room (minimum area of 400 sq feet) with three tables

Note: Please bring all your radiation instrumentation to the training. During the exercises you will have the opportunity to use them and learn how to operate them correctly.